UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,419	07/30/2003	William Randolph Schmidt	MP0974(13036/15)	7838

60537 7590 01/16/2009

BRINKS HOFER GILSON & LIONE/MARVELL
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
MCLEAN, NEIL R	

ART UNIT	PAPER NUMBER
2625	

MAIL DATE	DELIVERY MODE
01/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/630,419	SCHMIDT, WILLIAM RANDOLPH	
	Examiner	Art Unit	
	Neil R. McLean	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36 and 38-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36, and 38-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's argument, see Appeal Brief, filed 10/14/2008, with respect to the rejection(s) of claim(s) 36, and 38-52 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found art Comer et al. (US 7,212,300).

Status of Claims

2. Claims 36, and 38-52 are pending in this application.

Claims 1-20 and 37 have been canceled.

Claims 21-35 and 53-61 are withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 36, 38-41, and 44-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Comer et al. (US 7,212,300) hereinafter 'Comer'.

Regarding Claim 36:

Comer discloses a printer formatter comprising:

a processor to perform at least a first print function associated with a print job (e.g., microprocessor 16 shown in FIG. 3);

a system input/output (I/O) associated with the processor to receive an input signal and provide an output signal (This Ethernet processor integrates a 32-bit ARM.RTM. processor, Ethernet MAC, DMA controllers, I/O, timers, etc., onto a single chip.);

a formatter controller to perform at least a first formatting function associated with the print job (This Ethernet processor integrates a 32-bit ARM.RTM. processor, Ethernet MAC, DMA controllers, I/O, timers, etc., onto a single chip); and

a print server, in communication with the processor, to manage a print queue (e.g., The microprocessor, which consist of a single chip, is an embedded Internet server having a valid IP address as described in Column 3, lines 7-9).

Regarding Claim 38:

Comer further discloses the printer formatter of claim 36 wherein the printer formatter comprises a single microchip that includes the processor, the system I/O, the formatter controller, and the print server (The microprocessor, which consist of a single chip, is an embedded Internet server having a valid IP address. The chip may include Ethernet MAC and system controllers for (e.g.) memory, DMA, interrupts and timers. The chip may also

include cache, I/O, real time operating systems, device driver software and communications protocol software as described in Column 3, lines 5-15).

Regarding Claim 39:

Comer further discloses the printer formatter of claim 38 wherein the microchip is configured to function within the printer (e.g., The circuit diagram for microprocessor 16 is shown in FIG. 3).

Regarding Claim 40:

Comer discloses the printer formatter of claim 36 wherein the system I/O is adapted to receive the print job (e.g., Column 5, lines 20-45 discloses the process of a printing receiving and printing data).

Regarding Claim 41:

Comer discloses the printer formatter of claim 36 wherein the formatter controller is adapted to convert the print job from a first format to a second format (e.g., encoder 33 described in Column 4, lines 25-27)

Note: The Examiner perceives **Encoding** to be the process of transforming information from one format into another.

Regarding Claim 44:

Comer discloses the printer formatter of claim 36 wherein the system I/O is adapted to generate an I/O interrupt in response to receiving the input signal, and the processor is adapted to perform an I/O function in response to receiving

the I/O interrupt (e.g., the system controllers include memory, DMA, interrupts and timers as described in Claim 6; Microprocessor uses an RTOS operating system which uses interrupts to manage shared data and hardware resources among multiple tasks).

Regarding Claim 45:

Comer discloses the printer formatter of claim 44 wherein the I/O function includes receiving and storing the print job (e.g., FIG. 4 illustrates the memory (ROM and RAM) of the processor used to store the instructions required by the processor so it may perform the functions necessary to print images with a piezoelectric printhead).

Regarding Claim 46:

Comer discloses the printer formatter of claim 44 wherein the I/O function includes providing an indication to the print server that the print job has been received (Referring now to FIGS. 3 -10, circuit diagrams showing various components of a particularly preferred embodiment of the invention are provided. The circuit diagram for microprocessor 16 is shown in FIG. 3, and uses Ethernet support supplied by NetSilicon. FIG. 4 illustrates the memory (ROM and RAM) of the processor used to store the instructions required by the processor so it may perform the functions necessary to print images with a piezoelectric printhead.).

Regarding Claim 47:

Comer discloses the printer formatter of claim 36 wherein the print server is adapted to generate a print server interrupt in response to detecting the print job, and the processor is adapted to perform a print server function in response to receiving the print server interrupt (e.g., the system controllers include memory, DMA, interrupts and timers as described in Claim 6; Microprocessor uses an RTOS operating system which uses

interrupts to manage shared data and hardware resources among multiple tasks).

Regarding Claim 48:

Comer discloses the printer formatter of claim 36 wherein the processor is adapted to store the print job in the print queue (FIG. 4 illustrates the memory (ROM and RAM) of the processor used to store the instructions required by the processor so it may perform the functions necessary to print images with a piezoelectric printhead.)

Regarding Claim 49:

Comer discloses the printer formatter of claim 36 wherein the processor is adapted to provide a print job status notification. (The Internet connectivity of print engines 10 of the present invention permits their access from an Internet browser, for example, which results in a number of advantages. For example, the status of the print engines can be remotely monitored by a server operated by service or manufacturing personnel, for example. Commands can be sent, either by print engine 10 or by the servicing server, for example, and e-mail and pager alerts to or from the embedded server on the print engine may be sent or received.)

Regarding Claim 50:

Comer discloses the printer formatter of claim 36 wherein the processor is adapted to provide a print job complete notification. (The Internet connectivity of print engines 10 of the present invention permits their access from an Internet browser, for example, which results in a number of advantages. For example, the status of the print engines can be remotely monitored by a server operated by service or manufacturing personnel, for example. Commands can be sent, either by print engine 10 or by the servicing server, for example, and e-mail and pager alerts to or from the embedded server on the print engine may be sent or received.)

Regarding Claim 51:

Comer discloses the printer formatter of claim 36 wherein the processor is adapted to provide a print error notification.(The Internet connectivity of print engines 10 of the present invention permits their access from an Internet browser, for example, which results in a number of advantages. For example, the status of the print engines can be remotely monitored by a server operated by service or manufacturing personnel, for example. Commands can be sent, either by print engine 10 or by the servicing server, for example, and e-mail and pager alerts to or from the embedded server on the print engine may be sent or received.)

Regarding Claim 52:

Honma discloses the printer formatter of claim 36 wherein the processor is adapted to remove the print job from the print queue in response to a cancel signal. (This feature is inherent under the Simple Network Management Protocol (SNMP) and Management Information Base (MIB) in order to facilitate the exchange of management information between network devices.)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comer et al. (US 7,212,300) hereinafter 'Comer' in view of Chadez et al. (US 6,522,420) hereinafter 'Chadez'.

Regarding Claims 42 and 43:

Comer discloses the printer formatter of claim 36 and 37, but does not expressly disclose wherein the formatter controller is adapted to compress and decompress the print job.

Chadez discloses wherein the formatter controller is adapted to compress and decompress the print job (Figure 3; Step 66 'Compress Raster Data' and Step 70 'Decompress Raster Data')

Comer & Chadez are combinable because they are from the same field of endeavor of image processing; e.g., both references are classified in Class 358 subclass 1.15 wherein both disclose details of communication between elements within a static presentation system. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a formatter controller which is adapted to compress and decompress the print job. The suggestion/motivation for doing so is to reduce the transmission time and printing time of an image or file. Therefore, it would have been obvious to combine Comer's printing system with Chadez's method for compressing and decompressing data to obtain the invention as specified in order to free up the controller to perform other tasks.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okano (US 5,987,225) discloses a network including printing devices capable of processing both copying jobs and printing jobs, and also relates to a print output control device for performing various controls such as setting an operation mode of each printing device, assigning requested printing jobs to the printing devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. McLean whose telephone number is (571)270-1679. The examiner can normally be reached on Monday through Friday 7:30AM-4:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571.272.7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Neil R. McLean/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625